

## Claims

What is claimed is:

1. A garbage processing machine, wherein both an air supply line that supplies high-temperature air for drying and air for cooling, and an exhaust gas line that exhausts the air, are connected to a heating mixer that dry-processes garbage with mixing, and also wherein the garbage processing machine is comprising:
  - a deodorizing apparatus that is provided in an exhausted gas line and deodorizes exhausted gas at high temperature; and
  - a heater, which is provided in the air supply line and heats air by exhausted heat that is exhausted from the deodorizing apparatus.
2. A garbage processing machine according to claim 1, wherein a circulating line that is made to circulate a part of exhaust gas into the air supply line is connected to the exhaust gas line.
3. A garbage processing machine according to claim 1, wherein a preheater that preheats exhaust gas before the exhaust gas is introduced into a deodorizing apparatus is provided in downstream side of the deodorizing apparatus.
4. A garbage processing apparatus according to claim 1, wherein a dust removing apparatus is provided in the upstream side of the exhaust gas line.
5. A garbage processing apparatus according to claim 1, wherein the air supply line is divided into a plural number of air supply lines and the divided air supply lines are connected to the heating mixer.
6. A garbage processing apparatus according to claim 1, wherein the exhaust gas line is divided into a plural number of exhaust gas lines and the divided exhaust gas lines are connected to the heating mixer.
7. An operating method of garbage processing machine, wherein

in a garbage processing machine, wherein both an air supply line that supplies high-temperature air for drying and air for cooling, and an exhaust gas line that exhausts the air, are connected to a heating mixer that dry-processes garbage with mixing, and also wherein the garbage processing machine is comprising:

- a deodorizing apparatus that is provided in an exhausted gas line and deodorizes exhausted gas at high temperature; and
- a heater, which is provided in the air supply line and heats air by exhausted heat that is exhausted from the deodorizing apparatus,
- the exhaust gas temperature is constantly watched since the heating mixer starts operation of the heating mixer, only air for drying is supplied as it is from air supply line without mixing garbage until the temperature of exhaust gas reaches predetermined temperature,
- an operation that mixes garbage by actuating the heating mixer only when temperature of the exhaust gas reach a predetermined temperature is intermittently performed,
- the heating mixer is made to actuate continuous mixing when the distance between actuations becomes lower than a predetermined time, and afterwards,
- a cooling process is made to start by passing cooled air instead of air for drying when a temperature of the exhaust gas temperature reach a predetermined maximum temperature.

8. A heating mixer, wherein

in the heating mixer for dry-processing of garbage, it is composed that as well as a rotating axis is axially supported, which axis is the same as that of the bottom of a casing, in the casing with a shape like a generally rectangular shape or as such, a plural number of mixing impellers are radially provided over the rotating axis and along the axis, and also as well as air entrances are formed at the bottom part of the casing with a shape like a generally rectangular shape or as such, air exits are formed at the upper part of the casing.

9. A heating mixer according to claim 8, wherein a pair of air entrances and a pair of exits for exhaust gas are provided.

10. A heating mixer according to claim 8, wherein baffle plates that divide the upper space of the casing along the longitudinal direction of the casing are provided in the upper space in the casing with a shape like a generally rectangular shape or as such.
11. A heating mixer according to claim 10, wherein the air entrances and the exits for exhaust gas are provided in the corners of the casing, of which corners are separated by the baffle plates.
12. A heating mixer according to claim 8, wherein an air supply line is connected in lower oblique direction to the air entrance.
13. A heating mixer according to claim 8, wherein a mixing tip, which is inclined in the rotating direction and also in the longitudinal direction of the rotating axis, is provided at the edge of each of the mixing impellers.